

The rejection of Claims 1, 3-6, 11, 14, 15, and 17 under 35 U.S.C. § 103(a) as being unpatentable over Uchida et al. (US 5,817,958) in view of Ikeda et al. (US 2001/0056335-A1) and further in view of Buhrow et al. (US 4,988,208) is respectfully traversed.

Uchida et al. describe a plant monitoring and diagnosing method that includes detecting and accumulating plant operating conditions, apparatus operating conditions and environment conditions, inputting and accumulating plant inspection data, and monitoring and diagnosing plant conditions based on plant record information including the accumulated detection data and inspection data. The plant record information is stored in the form of a plant chart in which the detection data and the inspection data are compressed and accumulated such as a personal clinical chart, and the plant conditions are diagnosed based on the data in the plant chart. Current plant conditions are predicted in accordance with the data in the plant chart and a plant condition predicting model, and an abnormality in the plant conditions are monitored and diagnosed based on a comparison between the predicted current plant conditions and the current detection data. When an abnormality is detected as a result of diagnosing the plant conditions, an abnormal location and an abnormal item are identified and events which will ensue from the abnormality are predicted. Also, a residual life for each plant component, apparatus and member is evaluated based on the data in the plant chart and material degradation data calculated from the chart data.

Ikeda et al. describe a remote monitoring diagnostic system that includes a data storage file used to collect plant data representing the operation status of a plant and to store the plant data, a monitoring system to monitor the field plant according to the collected plant data, a database storing the past plant data associated with errors having occurred to the plant and

actions taken to cope with the errors. The monitoring system also includes a diagnostic system to analyze the plant data sent to the database, and a reporting system to send a report to the user of the plant regarding the causes for the error and/or actions taken to cope with the error based on the result of the analysis. Ikeda et al. do not describe nor suggest managing inspection requirements. Rather, Ikeda et al. describe a monitoring system that continuously monitors a process.

Buhrow et al. describe a piping corrosion monitoring system that uses corrosion data for individual inspection points within a piping circuit to estimate likely corrosion rates for other elements in the same circuit. Buhrow et al. describe updating the inspection database and generating a new inspection schedule using the updated inspection data. Buhrow et al. do not describe nor suggest determining the next required inspection of each plant component, providing a schedule of future inspection requirements sortable by at least one of date, component, criteria satisfaction, and defect indication, and notifying a user of events affecting the inspection schedule.

Claim 1 of the present application recites method for managing inspection requirements that includes receiving information relating to components in a plant, storing the information into the centralized database, cross-referencing the information received, updating the centralized database based on the information received modifying inspection requirements based on inspection result information. determining next required inspection of each plant component, providing a schedule of future inspection requirements sortable by at least one of date, component, criteria satisfaction, and defect indication, notifying a user of events affecting the inspection schedule, and providing information in response to an inquiry.

Uchida et al., Ikeda et al., and Buhrow et al., alone or in combination, do not describe nor suggest a method as recited in Claim 1. Particularly, Uchida et al., Ikeda et al., and Buhrow et al., alone or in combination, do not describe nor suggest a method that includes determining the next required inspection of each plant component, providing a schedule of future inspection requirements sortable by at least one of date, component, criteria satisfaction, and defect indication, and notifying a user of events affecting the inspection schedule. Rather, Uchida et al. describe a plant monitoring and diagnosing method that includes detecting and accumulating plant operating conditions, apparatus operating conditions and environment conditions, inputting and accumulating plant inspection data, and monitoring and diagnosing plant conditions based on plant record information including the accumulated detection data and inspection data. Ikeda et al. only describe a monitoring system that continuously monitors a process and do not describe nor suggest managing inspection requirements. Buhrow et al. describe updating the inspection database and generating a new inspection schedule using the updated inspection data but do not describe nor suggest providing a schedule of future inspection requirements sortable by at least one of date, component, criteria satisfaction, and defect indication, and notifying a user of events affecting the inspection schedule. Accordingly, Applicants submit that Claim 1 is patentable over Uchida et al., Ikeda et al., and Buhrow et al., alone or in combination.

Claims 3-6, 11, 14, 15, and 17 depend from independent Claim 1. When the recitations of dependent Claims 3-6, 11, 14, 15, and 17 are considered in combination with the recitations of Claim 1, Applicants respectfully submit that Claims 3-6, 11, 14, 15, and 17 likewise are patentable over Uchida et al., Ikeda et al., and Buhrow et al., alone or in combination.

For the reasons set forth above, Applicants respectfully request that the Section 103(a) rejection of Claims 1, 3-6, 11, 14, 15, and 17 be withdrawn.

The rejection of Claims 2, 7-9, and 16 under 35 U.S.C. § 103(a) as being unpatentable over Uchida et al. (US 5,817,958) in view of Ikeda et al. (US 2001/0056335-A1), further in view of Buhrow et al. (US 4,988,208), and still further in view of Klinvex (US 4,642,215) is respectfully traversed.

As explained above, Claim 1 is submitted to be patentable over Uchida et al., Ikeda et al., and Buhrow et al., alone or in combination.

Klinvex et al. describe a universal tool for ultrasonic testing of tubular objects such as nuclear reactor vessels. The tool includes an array of transducers mounted in groups for common inspection of a particular weld volume. The individual transducers, as well as the groups, are arranged in a compact assembly for minimizing the overall dimensions of the tool and its corresponding weight. The transducers are arranged in a manner which permits inspection of tubular objects having different radii of curvature and corresponding different diameters with a single tool without the need of having to individually adjust the orientation angles of the transducers. Klinvex et al. do not describe nor suggest a method for managing inspection requirements.

Uchida et al., Ikeda et al., Buhrow et al., and Klinvex et al., alone or in combination, do not describe nor suggest a method as recited in Claim 1. Particularly, Uchida et al., Ikeda et al., Buhrow et al., and Klinvex et al., alone or in combination, do not describe nor suggest a method that includes determining the next required inspection of each plant component, providing a schedule of future inspection requirements sortable by at least one of date, component, criteria

satisfaction, and defect indication, and notifying a user of events affecting the inspection schedule. Specifically, Klinvex et al. do not describe nor suggest any method for managing inspection requirements. Accordingly, Applicants submit that Claim 1 is patentable over Uchida et al., Ikeda et al., Buhrow et al., and Klinvex et al., alone or in combination.

Claims 2, 7-9, and 16 depend from independent Claim 1. When the recitations of dependent Claims 2, 7-9, and 16 are considered in combination with the recitations of Claim 1, Applicants respectfully submit that Claims 2, 7-9, and 16 likewise are patentable over Uchida et al., Ikeda et al., Buhrow et al., and Klinvex et al., alone or in combination.

For the reasons set forth above, Applicants respectfully request that the Section 103(a) rejection of Claims 2, 7-9, and 16 be withdrawn.

The rejection of Claims 12, 13, 18-20, 22, and 24-27 under 35 U.S.C. § 103(a) as being unpatentable over Uchida et al. (US 5,817,958) in view of Ikeda et al. (US 2001/0056335-A1), further in view of Buhrow et al. (US 4,988,208), and still further in view of Eryurek et al. (US 2002/0123864-A1) is respectfully traversed.

As explained above, Claim 1 is submitted to be patentable over Uchida et al., Ikeda et al., and Buhrow et al., alone or in combination.

Eryurek et al. describe a system and method for analyzing a process that includes collecting process data within a process control plant, transmitting the collected process data to a remote data processing facility, analyzing the process data within the remote data processing facility to generate analysis data using one of a plurality asset or process analysis tools stored within a database of the remote data processing facility, and transmitting the analysis data to the

process control plant. Eryurek et al. do not describe nor suggest any method for managing inspection requirements.

Uchida et al., Ikeda et al., Buhrow et al., and Eryurek et al., alone or in combination, do not describe nor suggest a method as recited in Claim 1. Particularly, Uchida et al., Ikeda et al., Buhrow et al., and Eryurek et al., alone or in combination, do not describe nor suggest a method that includes determining the next required inspection of each plant component, providing a schedule of future inspection requirements sortable by at least one of date, component, criteria satisfaction, and defect indication, and notifying a user of events affecting the inspection schedule. Specifically, Eryurek et al. do not describe nor suggest any method for managing inspection requirements. Accordingly, Applicants submit that Claim 1 is patentable over Uchida et al., Ikeda et al., Buhrow et al., and Eryurek et al., alone or in combination.

Claims 12 and 13 depend from independent Claim 1. When the recitations of dependent Claims 12 and 13 are considered in combination with the recitations of Claim 1, Applicants respectfully submit that Claims 12 and 13 likewise are patentable over Uchida et al., Ikeda et al., Buhrow et al., and Eryurek et al., alone or in combination.

Claim 18 of the present application recites a network-based system for managing inspection requirements that includes a client system comprising a browser, a data storage device for storing information, and a server system configured to be coupled to the client system and the database. The server system is further configured to receive information relating to inspection of components of a specific plant, store the information into a centralized database, update the centralized database based on the information received, modify inspection requirements based upon inspection result information, determine next required inspection of each plant component,

cross-reference the information received against the components, provide a schedule of future inspection requirements sortable by at least one of date, component, criteria satisfaction, and defect indication, notify a user of events affecting the inspection schedule, and provide information in response to an inquiry.

Uchida et al., Ikeda et al., Buhrow et al., and Eryurek et al., alone or in combination, do not describe nor suggest a system as recited in Claim 18. Particularly, and for the reasons explained above, Uchida et al., Ikeda et al., Buhrow et al., and Eryurek et al., alone or in combination, do not describe nor suggest a system that includes a server system that is configured to modify inspection requirements based upon inspection result information, determine next required inspection of each plant component, cross-reference the information received against the components, provide a schedule of future inspection requirements sortable by at least one of date, component, criteria satisfaction, and defect indication, notify a user of events affecting the inspection schedule, and provide information in response to an inquiry. Accordingly, Applicants submit that Claim 18 is patentable over Uchida et al., Ikeda et al., Buhrow et al., and Eryurek et al., alone or in combination.

Claims 19-20, 22, and 24-27 depend from independent Claim 18. When the recitations of dependent Claims 19-20, 22, and 24-27 are considered in combination with the recitations of Claim 1, Applicants respectfully submit that Claims 19-20, 22, and 24-27 likewise are patentable over Uchida et al., Ikeda et al., Buhrow et al., and Eryurek et al., alone or in combination.

For the reasons set forth above, Applicants respectfully request that the Section 103(a) rejection of Claims 12, 13, 18-20, 22, and 24-27 be withdrawn.

The rejection of Claims 21, 23, and 28-31 under 35 U.S.C. § 103(a) as being unpatentable over Uchida et al. (US 5,817,958) in view of Ikeda et al. (US 2001/0056335-A1), Buhrow et al. (US 4,988,208), and of Eryurek et al. (US 2002/0123864-A1) and further in view of Klinvex et al. (US 4,642,215) is respectfully traversed.

As explained above, Uchida et al., Ikeda et al., Buhrow et al., and Eryurek et al., alone or in combination, do not describe nor suggest a system that includes a server system that is configured to modify inspection requirements based upon inspection result information, determine next required inspection of each plant component, cross-reference the information received against the components, provide a schedule of future inspection requirements sortable by at least one of date, component, criteria satisfaction, and defect indication, notify a user of events affecting the inspection schedule, and provide information in response to an inquiry. Accordingly, Applicants submit that Claim 18 is patentable over Uchida et al., Ikeda et al., Buhrow et al., and Eryurek et al., alone or in combination.

Klinvex et al. do not describe nor suggest a server system. Rather, Klinvex et al. describe a universal tool for ultrasonic testing of tubular objects such as nuclear reactor vessels. Accordingly, Applicants submit that Claim 18 is patentable over Uchida et al., Ikeda et al., Buhrow et al., Eryurek et al., and Klinvex et al., alone or in combination.

Claims 21 and 23 depend from independent Claim 18. When the recitations of dependent Claims 21 and 23 are considered in combination with the recitations of Claim 18, Applicants respectfully submit that Claims 21 and 23 likewise are patentable over Uchida et al., Ikeda et al., Buhrow et al., Eryurek et al., and Klinvex et al., alone or in combination.

Claim 28 of the present application recites a computer program embodied on a computer readable medium for managing inspection requirements. The program includes a code segment that receives information relating to components including inspection regulations and inspection results, a code segment that maintains a database by adding, deleting and updating information relating to components, a code segment that generates inspection requirements based on the information relating to components, a code segment that determines next required inspection of each plant component, a code segment that provides a schedule of future inspection requirements sortable by at least one of date, component, criteria satisfaction, and defect indication, a code segment that notifies a user of events affecting the inspection schedule, and a code segment that provides information to be displayed on a user system.

Uchida et al., Ikeda et al., Buhrow et al., Eryurek et al., and Klinvex et al., alone or in combination, do not describe nor suggest a computer program embodied on a computer readable medium for managing inspection requirements. Particularly, Uchida et al., Ikeda et al., Buhrow et al., Eryurek et al., and Klinvex et al., alone or in combination, do not describe nor suggest a computer program that includes a code segment that generates inspection requirements based on the information relating to components, a code segment that determines next required inspection of each plant component, a code segment that provides a schedule of future inspection requirements sortable by at least one of date, component, criteria satisfaction, and defect indication, a code segment that notifies a user of events affecting the inspection schedule, and a code segment that provides information to be displayed on a user system.

Further, Applicants respectfully submit that it would not be obvious to combine the teachings of Uchida et al., and the teachings of Ikeda et al., and the teachings of Buhrow et al.,

and the teachings of Eryurek et al., and the teachings of Klinvex et al. because there is no motivation to do so other than the teachings of Applicants' application. Particularly, the Office Action, at page 5, suggest that "it would have been obvious to one skilled in the art to modify the invention of Uchida to include a corresponding method and system for sending data to a central location, as taught by Ikeda, because, as suggested by Ikeda, the combination would have provided a method for monitoring a plurality of plants from one location". Applicants submit that Uchida is directed to a monitoring and diagnosing method and system for a single plant. There is no indication, in Uchida, of the need to monitor more than one plant at a time or that the described method and system is capable of monitoring and diagnosing more than one plant at a time. Applicants submit that the motivation to combine the cited art came from Applicants own application.

Also, the Office Action, at page 5, suggests that "it would have been obvious to one skilled in the art to modify the invention of Uchida to include modifying the next required inspection of each plant component based upon inspection result information results as taught by Buhrow, because Buhrow suggests that the combination would have allowed the current inspection requirements to be updated with respect to inspection results specific to each individual monitored component of the plant". Applicants submit that this reasoning is circular, and also, that there is no indication in Uchida et al. that there is any need to modify inspection schedules.

Further, the Office Action suggests that "it would have been obvious to one skilled in the art to modify the invention of Uchida . . . to include a method for performing the weld inspection and specifying that the data correspond to inspection regulations or recommendations, as taught

by Klinvex, because the combination would have provided the means necessary to test the reactor welds, taught by Uchida, and further as suggested by Klinvex, by cross-referencing the component data against inspection regulations". Applicants submit that Klinvex et al. do not describe nor suggest a method of performing weld inspections that specify the data correspond to inspection regulations or recommendations. Rather, Klinvex et al. teach a universal tool for ultrasonic weld inspections of tubular objects in a nuclear reactor that are required to be inspected on a periodic basis by government regulations. Further, there is no indication that the teachings of Uchinda et al. need to be modified by using the inspection tool of Klinvex et al.

Still further, the Office Action suggests that it would have been obvious to modify the teachings of Uchida to include a specific manner in which to present information to the user, because the combination would have provided a method for conveniently displaying results of diagnosis of many different aspects of plant operation to one location. Applicants submit that Uchida et al. already teaches a means of displaying evaluation results (see Figure 14) and there has been no showing that there is a need to modify the display means taught by Uchida et al.

Accordingly, Applicants submit that Claim 28 is patentable over Uchida et al., Ikeda et al., Buhrow et al., Eryurek et al., and Klinvex et al., alone or in combination.

Claims 29-31 depend from independent Claim 28. When the recitations of dependent Claims 29-31 are considered in combination with the recitations of Claim 28, Applicants respectfully submit that Claims 29-31 likewise are patentable over Uchida et al., Ikeda et al., Buhrow et al., Eryurek et al., and Klinvex et al., alone or in combination.

For the reasons set forth above, Applicants respectfully request that the Section 103(a) rejection of Claims 21, 23, and 28-31 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Favorable action is respectfully solicited.

Respectfully submitted,



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For: SYSTEMS AND METHODS FOR
MANAGING INSPECTIONS

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SUBMISSION OF MARKED UP CLAIMS

Commissioner for Patents

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A marked-up version of amended Claims 1, 18, and 28, in accordance with 37 C.F.R. § 1.121(c)(1)(ii), follows below.

IN THE CLAIMS

1. (twice amended) A method for managing inspection requirements using a network-based system including a server system coupled to a centralized database and at least one client system, said method comprising:

receiving information relating to components in a plant;

storing the information into the centralized database;

cross-referencing the information received;

updating the centralized database based on the information received;

modifying inspection requirements based on inspection result information;

determining next required inspection of each plant component; [and]

providing a schedule of future inspection requirements sortable by at least one of date,

component, criteria satisfaction, and defect indication;

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notifying a user of events affecting the inspection schedule; and

providing information in response to an inquiry.

18. (twice amended) A network-based system for managing inspection requirements, said system comprising:

a client system comprising a browser;

a data storage device for storing information;

a server system configured to be coupled to said client system and said database, said server system further configured to:

receive information relating to inspection of components of a specific plant;

store the information into a centralized database;

update the centralized database based on the information received;

modify inspection requirements based upon inspection result information;

determine next required inspection of each plant component;

cross-reference the information received against the components; [and]

provide a schedule of future inspection requirements sortable by at least one of date,

component, criteria satisfaction, and defect indication;

notify a user of events affecting the inspection schedule; and

provide information in response to an inquiry.

28. (twice amended) A computer program embodied on a computer readable medium for managing inspection requirements, said program comprising:

a code segment that receives information relating to components including inspection regulations and inspection results;

a code segment that maintains a database by adding, deleting and updating information relating to components;

a code segment that generates inspection requirements based on the information relating to components;

a code segment that determines next required inspection of each plant component; [and]

a code segment that provides a schedule of future inspection requirements sortable by at least one of date, component, criteria satisfaction, and defect indication;

a code segment that notifies a user of events affecting the inspection schedule; and

a code segment that provides information to be displayed on a user system.

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